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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,265	10/25/2005	Hiroki Ose	72035	2720
23872 7590 12/17/2008 MCGLEW & TUTTLE, PC P.O. BOX 9227 SCARBOROUGH STATION SCARBOROUGH, NY 10510-9227				
EXAMINER CHAUDHRY, SAEED T				
ART UNIT 1792		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/554,265

Applicant(s)

OSE ET AL.

Examiner

Saeed T. Chaudhry

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/26/08.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Applicant's amendments and remarks filed October 1, 2008 have been acknowledged by the examiner and entered. Claims 18-23 have been canceled and claims 1-17 and 24 are pending in this application for consideration.

Claim Rejections - 35 USC § 112

Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase “mist-like” renders the claim indefinite because the claimed process includes steps not actually disclosed (those encompassed by “the like) and the scope of the claim is unascertainable. Ex parte Caldwell, 1906 CD 58, (Commr pats 1905).

New ground of rejection **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-2, 7-9 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campo et al in view of Payzant.

Campo et al (5,800,627) disclose an apparatus having a loading section, a pre-wash chamber, a wash chamber, two rinse chambers and three air drying chambers. All the wash and rinse chambers have nozzles for jetting liquid and drying chambers have nozzles for jetting air. Air curtain is provided in-between the wash, rinse and drying section to prevent cross contamination from one chamber to another (see figs. 1-2, 5 and col. 6, lines 1-14). The reference fails to provide water curtains between the chambers.

Payzant (5,259,889) disclose an apparatus having endless conveyor; a loading section, a washing chamber, a rinsing chamber and a un-loading section. The washing and rinsing chamber have nozzles for jetting liquid. The reference discloses a water curtain 204 between the washing and rinsing chambers, wherein water curtain 204 provides a barrier which prevents extraneous spray from the wash compartment from infiltrating into and possibly contaminating the cleaner water in the rinse compartment (see figs. 1-2 and col. 13, lines 5-10). The reference fails to disclose an air curtain.

It would have been obvious at the time applicant invented the claimed apparatus to incorporate water curtain as disclosed by Payzant into the apparatus of Campo et al since water curtain and air curtain are known in the art to prevent the cross contamination between the chamber.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campo et al in view of Payzant as applied to claim 1 above, and further in view of JP-2003-017459.

Campo et al and Payzant were discussed Supra. However, the references fails to disclose specific pressure and gas mixed liquid.

JP-2003-017459 discloses an apparatus having a nozzle and a jet mechanism for jetting a mist of a cleaning liquid at a pressure of 3 to 5 MPa. Wherein particle size of the mist is in the range of 50 micrometer or less. Jet means 20 is provided with the air compressor 23 and a cleaning fluid tank 24, which is connected to a pump 22. The pump 22 is connected to the cleaning nozzle 21 (see abstract and translation). The apparatus is capable of mixing gas with liquid.

It would have been obvious at the time applicant invented the claimed apparatus to include a cleaning liquid mist nozzle for providing 50 micrometer or less particle size as disclosed by JP-2003-017459 in the apparatus of Campo et al. for purpose of cleaning the surface of an object, since mist nozzle capable of removing very small diameter contaminants from the object. Further, one of ordinary skill in the art would manipulate the pressure of the mist liquid for better and efficient results.

Claims 6, 10 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Compo et al in view of Payzant and JP-2003-017459 as applied to claims 1 and 8 above, and further in view of Varpio and Bryer et al.

Campo et al and Payzant were discussed Supra. However, the references fails to disclose Surfactant tank, a mixing tank and re-circulate the cleaning solution.

Varpio (6,530,996) discloses washing apparatus may comprise a pre-wash zone 2, followed by a main wash zone 3 and a rinsing zone 4. The washing apparatus is preceded by a feeder conveyor 5 bringing in the racks 21a, 21b and, correspondingly, followed by a discharge

conveyor 6 at the outlet end. Moreover, the washing apparatus comprises containers 7 and 8, shown schematically, for storing the washing fluid for the pre-wash and the main wash and from where it is cycled by means of pumps 9 and 10 to both the zones separately in order to be sprayed onto the dishes to be washed by means of nozzles 11 and 12 provided in the pumps. Furthermore, it comprises a container 13 into which the water used for rinsing is collected from the rinsing zone 4, from where the used water is conveyed further to the washing zone. The rinsing zone is provided with nozzles 14 into which clean water is supplied for the rinsing by means of pumps 15. The washing apparatus further comprises containers 16 and 17 for feeding the necessary chemicals to the washing fluids used in the pre-wash and main wash zones (see col. 2, line 62 to col. 3, line 13).

Bryer et al (2001/0047812) disclose a mix tank 32 is suspended on load cells 52 supported on the frame 12. A surfactant tank or bottle 35 is connected to the mix tank 32 via a fluid line and a surfactant delivery pump 49. An external source of de-ionized water 110 is connected to the mix tank 32 via a fluid line. The mix tank 32 is also connected via fluid lines, and via a mix tank pump 48 and control valves 47 to a outer rinse manifold 28 (manifold R6 in FIGS. 10 and 11) and to an inner rinse manifold 29 (manifold R3 in FIGS. 10 and 11). A filter 34 is placed in the fluid line from the mix tank 32, before the manifolds 28 and 29. Pump 48 pumps surfactant from the tank or bottle 35 into the mix tank 32. Pump 49 pumps the DI-water/surfactant solution from the mix tank 32, to the rinse manifolds 28 and 30 (see [0033]).

It is well known in the art to use a mixing tank for chemical as disclosed by Bryer et al. Therefore, one of ordinary skill in the art would have use mixing tank and chemical tank for purpose of supplying constant chemical concentration in the cleaning apparatus. Further, is is

well known in the art to re-circulate the rinsing liquid from the rinsing chamber to washing supply tank to use and re-circulate the liquid for saving and reducing the liquid consumption in the cleaning apparatus as disclosed by Varpio. Therefore one of ordinary skill in the would use and re-circulate the cleaning and rinsing liquids in the apparatus of Campo et al for reducing the consumption of the liquid.

Response to Applicant's Arguments

Applicant's arguments with respect to claims 1-17 and 24 have been considered but are deemed to be moot in view of the new grounds of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saeed T. Chaudhry whose telephone number is (571) 272-1298. The examiner can normally be reached on Monday-Friday from 9:30 A.M. to 4:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Barr, can be reached on (571)-272-1414. The fax phone number for non-final is (703)-872-9306.

When filing a FAX in Gp 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are for entry into the file of the application. This will expedite processing of your papers.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Saeed T. Chaudhry

Patent Examiner

/Michael Barr/

Supervisory Patent Examiner, Art Unit 1792